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On: 27 January 2015, At: 10:43

Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number:
1072954 Registered office: Mortimer House, 37-41 Mortimer Street,
London W1T 3JH, UK



Annals and Magazine of Natural History: Series 2

Publication details, including instructions for
authors and subscription information:

<http://www.tandfonline.com/loi/tnah08>

Note on the *Aphyllanthes monspeliensis*, and the new family of the *Aphyllanthaceæ*

M. Parlatore

Published online: 23 Dec 2009.

To cite this article: M. Parlatore (1855) Note on the *Aphyllanthes monspeliensis*, and the new family of the *Aphyllanthaceæ*, *Annals and Magazine of Natural History: Series 2*, 16:94, 300-303, DOI: [10.1080/037454809495539](https://doi.org/10.1080/037454809495539)

To link to this article: <http://dx.doi.org/10.1080/037454809495539>

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species, I should have considered it identical with *Euplectes erythropus*, Hartl., with which I am not acquainted in nature, but which is described and figured with care in the second volume of the 'Abhandlungen' of the Natural History Society of Hamburg, 1852. This bird has only a little red round the base of the bill and above the eyes, whilst the new species has the whole of the head of a fine uniform blood-red, and the throat and front of the neck are spotted with red and black.

Nor is it likely that the difference between these birds is sexual, as Hartlaub gives descriptions of both sexes of his *E. erythropus*, and states that the female is yellow where the male is red.

6. *Chrysomitris xanthogastra*. Mas. C. nigerrima subnitens; speculo lato alarum, rectricum basi, exceptis duabus intermediis, et abdomine cum hypochondriis et crisso aureo-flavis. Rostro cærulescenti-nigro; pedibus brunneo-nigris.

Total length 9 centim. (about $3\frac{1}{2}$ inches).

Hab. Ocaña, New Granada.

This is one of the smallest species of the genus. In its colour it resembles the *Carduelis atratus*, D'Orb., but differs in its size, which is about one-fourth less.—*Bull. de l'Acad. Roy. de Belgique*, xxii. p. 150–152, 1855.

The Operculum of Diplommata. By Capt. THOMAS HUTTON.

The operculum of *Diplommata folliculus* having been overlooked, from its small size and hidden position, in the original description, Mr. Benson was inclined to doubt its existence, but afterwards corrected his former opinion. Captain Hutton formerly believed it might be a *clausium*, attached to the shell by an elastic ligament: he has recently most kindly written me a note, in which occurs the following passage, setting this question at rest: "Having placed my specimens upon some wet and withered oak leaves (*Q. incana*), which the animal prefers to anything else, I waited, magnifier in hand, to decide the knotty point of operculum or no operculum, and lo! when the animal came forth, I saw the little shield-like operculum *carried horizontally upon the back of the animal*, and not attached to the shell. When the animal is just coming out of the shell, the appendage is plain with the aid of a glass, but not so easily seen when in full motion, as it lies upon the back of the animal, just under the shell, and is thus in a measure hidden."—J. E. GRAY.

Note on the Aphyllanthes monspeliensis, and the new Family of the Aphyllanthaceæ. By M. PARLATORE.

The *Aphyllanthes monspeliensis* is a plant which has the aspect of a little rush, or rather that of the *Dianthus proliifer*; it grows abundantly in the stony, sterile parts of the basin of the Mediterranean, in the south of France as far as Nice, in Spain, Portugal and Algeria. This plant was first described and figured by Pena and Lobel, who did not fail to notice a certain resemblance between its flowers and

those of a *Dianthus*, and who described them as borne within a glumaceous involucre. From this same resemblance, G. Bauhin placed the *Aphyllanthes* in his section *Caryophyllus sylvestris*, under the name of *Caryophyllus cæruleus monspeliensis*.

Tournefort established the genus *Aphyllanthes*, placing it in the class of *Liliaceæ*, and considering the involucre as a scaly and nearly tubular calyx; he gave a plate containing an analysis of the flower and even of the capsule. Linnæus retained the genus *Aphyllanthes*, and in the first editions of his 'Genera Plantarum,' it is placed beside the genus *Juncus*; for Linnæus regarded the *Aphyllanthes* as nearly a rush, saying in the observations upon this plant, "*Juncus esset si corollâ careret.*"

In the 'Genera Plantarum' of Antoine-Laurent de Jussieu, *Aphyllanthes* is arranged in the first section of the order of *Junci*, in which we also find the genera *Eriocaulon*, *Restio*, *Xyris*, and *Juncus*, each of which has since been raised to the rank of a family.

DeCandolle continued to regard the *Aphyllanthes* as a plant belonging to the family *Junceæ*, although with him this family had not the same limits as with Jussieu. This opinion has been followed by several recent botanists,—as by Ventenat, Bartling, Reichenbach, and others.

Labillardière having discovered the genus *Borya* in New Holland, arranged it also amongst the *Junceæ*, as it is allied to *Aphyllanthes*; but Mr. Robert Brown, in his celebrated 'Prodromus,' whilst remarking that the aspect of *Borya* is that of a rush, indicated the differences existing between the *testa* and *albumen* of the seeds and those of the *Junceæ*; this led him to arrange *Borya* in the family of the *Asphodeleæ*, which, with him, includes a great part of the *Asphodeli* and *Asparagi* of Jussieu.

Endlicher, in his 'Genera Plantarum,' placed *Aphyllanthes*, *Borya*, *Johnsonia*, *Laxmannia*, and a new genus which he calls *Alania*, at the end of the *Liliaceæ*, considering them as genera allied to the *Asphodels* (genera *Asphodeleis affinia*); this has been followed by Kunth and Schnitzlein; and the latter has formed for these plants a tribe of *Liliaceæ* which he calls *Juncopsidææ*. Thus, three different opinions now exist as to the family in which the *Aphyllanthes* should be placed: according to one of these it is a rush; according to another, an *Asphodel*; and the third approximates it to the *Asphodels* or the *Lilies*, according to the extension given to the limits of the great family *Liliaceæ*.

Few have, however, carefully studied the *Aphyllanthes monspeliensis* in the living state, at least to judge from the published figures and descriptions, which are partially false. In the researches upon the monocotyledonous plants, which I have followed for several years, I have examined the *Aphyllanthes*, which presents a singular structure, especially in the parts of the flower. The most remarkable characters of the plant are the following:—

1. A rhizome with branches in the form of leafless stems.
2. Solitary flowers, or flowers united two or three together, borne at the apex of the branches, and accompanied by scale-like bracts.

3. A scaly involucre proper to each flower, composed of five bracts united together to a great extent so as to form a tubular calyx, and persistent after flowering, when it envelopes the capsule.

4. A pedunculated flower in the interior of this involucre; its perigonium is formed of six membranous, petaloid leaflets, arranged in two rows, and furnished with a pretty long claw, as in the *Sileneaceæ*.

5. The æstivation of these leaflets of the perigonium is imbricated, and they cover each other at the tips.

6. Six stamina arranged in two rows, of which the external are the shortest; they are inserted by filiform filaments upon the throat of the perigonium, and the anthers are bilocular and introrse.

7. Ovary stipitate, trilocular, with a single ovule in each cell.

8. Ovules amphitropal, reversed, inserted towards the middle of the inner angle of the cell.

9. Stigmata trifid; each division furnished with a large lobe below.

10. Capsule rostrated, splitting into three valves (loculicido-tri-valve), with a single seed, furnished with a crustaceous testa and a fleshy perisperm, and containing an axile embryo, half the length of the perisperm.

From these characters it appears to me that we must regard this plant as the type of a new family, to which I propose to give the name of *Aphyllanthaceæ*.

This family approaches the *Junceæ* in the characters of the organs of vegetation, and the *Liliaceæ* in those of the organs of reproduction, so that it appears to form the passage between these two natural families of plants. Nevertheless it differs essentially from both, in the presence of an involucre which persists after inflorescence, and in the imbricated æstivation of the leaflets of the perigonium, even of those of the outer row, which is valvate in the *Junceæ* and *Liliaceæ*, the leaflets of which have the apices perfectly free, even in those species in which the leaflets cover each other slightly at the margins. In *Aphyllanthes*, on the contrary, the leaflets of the perigonium cover each other at the tips, so that a form of bud is produced different from that of the *Liliaceæ* and *Junceæ*.

In other respects the *Aphyllanthaceæ* differ principally from the *Junceæ* in the membranous and petaloid nature of the leaflets of the perigonium, which wither and fall after inflorescence; in the crustaceous testa of the seed, and especially in the embryo, which is situated in the axis of a fleshy perisperm of double its length. In the *Junceæ* the leaflets of the perigonium are glumaceous and rarely subpetaloid, but always persistent; their seeds have a membranous testa and enclose a small embryo, which only occupies the base of the perisperm.

Besides the characters already indicated, the *Aphyllanthaceæ* also differ from the *Liliaceæ* in the characters of the vegetation, and in the singular structure of the flower, which presents a distinct resemblance to that of a *Sileneaceous* plant, whence is partly derived that resemblance to a *Dianthus* noticed even by the older writers.

The establishment of this family appears to me to acquire greater importance, as some at least of the genera *Borya*, *Alania*, *Johnsonia*, and *Laxmannia*, must be referred to it; these are genera allied to *Aphyllanthes*, which, in the characters of their vegetation, resemble either the *Junceæ* or the *Cyperaceæ*, and which have their petaloid flowers accompanied by scale-like persistent bracts, the two superior of which are opposite, almost like the glumes of the *Gramineæ*, and are sometimes bifid or trifid, bidentate or tridentate at the apex. These flowers are also disposed in groups or heads, which, after flowering, present a great resemblance to the heads of *Chaetospora* or *Xyris* after their petals have fallen.—*Comptes Rendus*, 27th August 1855, p. 344.

METEOROLOGICAL OBSERVATIONS FOR AUG. 1855.

Chiswick.—August 1. Very fine. 2. Very fine: heavy rain. 3—5. Very fine. 6. Overcast. 7. Very fine. 8. Rain: thunder: heavy rain. 9. Cloudy and fine: clear at night. 10. Foggy, with heavy dew: very fine: slight haze: very fine. 11. Slight haze: very fine. 12. Overcast: fine: clear. 13. Very fine. 14. Cloudy and fine. 15, 16. Very fine. 17. Slight fog: very fine. 18. Very fine. 19. Very fine: slight rain at night. 20. Slight rain: cloudy and boisterous. 21. Fine: clear and windy. 22. Very fine. 23. Very fine: much sheet and forked lightning at night. 24—26. Very fine. 27. Very fine: cloudy at night. 28, 29. Very fine. 30. Very fine: clear at night. 31. Very fine.

Mean temperature of the month 61°·63
Mean temperature of Aug. 1854 60°·55
Mean temperature of Aug. for the last twenty-nine years ... 61°·98
Average amount of rain in Aug. 2·446 inches.

Boston.—Aug. 1. Fine: rain A.M. 2—4. Fine. 5, 6. Cloudy. 7. Cloudy: rain A.M. and P.M., with thunder. 8. Cloudy: rain A.M. and P.M. 9. Rain A.M. 10. Fine. 11. Cloudy. 12. Cloudy: rain A.M. 13. Fine. 14. Cloudy. 15—18. Fine. 19. Fine: rain A.M. 20. Cloudy: rain A.M. 21, 22. Cloudy. 23. Cloudy: rain A.M. and P.M. 24. Fine. 25. Fine: rain P.M. 26—28. Fine. 29. Cloudy. 30, 31. Fine.

Sandwich Manse, Orkney.—Aug. 1. Cloudy A.M.: fine, fog P.M. 2. Rain A.M.: fine, cloudy P.M. 3. Clear A.M.: fine, drops, thunder and lightning P.M. 4. Rain A.M.: drizzle, showery P.M. 5. Bright A.M.: cloudy P.M. 6. Clear A.M. and P.M. 7. Rain A.M.: showers P.M. 8. Rain A.M.: drizzle P.M. 9. Drizzle A.M.: clear, vapour P.M. 10. Hazy A.M.: damp P.M. 11. Cloudy A.M.: showers P.M. 12. Cloudy A.M.: damp P.M. 13. Showers A.M.: cloudy P.M. 14. Bright A.M.: cloudy P.M. 15. Drizzle A.M.: cloudy P.M. 16. Cloudy A.M.: rain P.M. 17. Cloudy A.M. and P.M. 18, 19. Cloudy A.M.: cloudy, thunder and lightning P.M. 20. Showers A.M.: rain P.M. 21. Bright A.M.: cloudy P.M. 22. Showers A.M. and P.M. 23. Showers, bright A.M.: clear P.M. 24. Cloudy A.M.: rain P.M. 25. Clear A.M. and P.M. 26, 27. Rain A.M.: cloudy P.M. 28. Clear A.M.: showers P.M. 29. Bright A.M.: clear P.M. 30. Drops A.M.: clear, drops P.M. 31. Cloudy A.M. and P.M.

Mean temperature of Aug. for twenty-eight previous years ... 54°·99
Mean temperature of this month 56°·10
Mean temperature of Aug. 1854 55°·06
Average quantity of rain in Aug. for fifteen previous years ... 2·95 inches.